Standardisation and harmonisation of quantitative oncology PET/CT studies

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1. Taking part in a PET/CT accreditation program increases accuracy and precision of quantitative imaging in your department. This thesis, chapter 2

2. Regardless of manufacturer or model, all PET/CT systems studied in this thesis are able to comply with EARL1 specifications. This thesis, chapter 2

3. State of-the-art acquisition and reconstruction technologies of new PET/CT systems increase variability of quantitative results if not properly taken into account. This thesis, chapter 3

4. A single EARL2 reconstruction may be applied rather than separate reconstructions for quantification and lesion detection. This thesis, chapter 3

5. SUVpeak and TLG may still provide comparable quantitative results between PET/CT systems in which the contrast recovery performance is unknown. This thesis, chapters 3 and 4

6. Existing standards for quantitative PET/CT performance need to evolve with and accommodate new and emerging technologies. This thesis, chapter 4

7. Regardless of manufacturer or model, all modern PET/CT systems investigated in this thesis are able to comply with EARL2 standards while enabling backwards compatibility with EARL1. This thesis, chapter 4

8. EARL2 standards will lead to increased image contrasts and SUVs regardless disease. This thesis, chapter 4

9. Harmonisation of quantitative PET/CT performances for isotopes other than F-18 is feasible and may be more easily achieved when previous accreditations are already in place. This thesis, chapter 5

10. The pessimist sees difficulty in every opportunity. The optimist sees opportunity in every difficulty. Winston Churchill